

Discipline	PROGRAM SYSTEMS	code: 23	summer semester
Specialty	Computer Systems and Technologies		
ECTS credits: 6	Form of assessment: exam		
Lecturer	Assoc. Prof. Mariana Stoeva, PhD Room 310 TB Phone: +359 52 383 616 E-mail: mariana_stoeva@tu-varna.bg		
Department	Software and Internet Technologies		
Faculty	Faculty of Computing and Automation		
<p>Learning objectives:</p> <p>The course introduces students to the environment, technology and technology for application programming in the WINDOWS environment. The discipline examines:</p> <ul style="list-style-type: none"> - basic programming software under WINDOWS (message processing, menu operations, dialog and graphic elements, etc.), and - tooling and programming tools for creating complex applications (DLL, COM, MFC, ATL, ActiveX and ODBC interface). <p>The course provides all special subjects from the curriculum of the specialty, using the knowledge of system programming in high-level languages (C, C++) and forming a user interface in the Windows graphical operating environment: "Computer graphics", "Databases", "Operating Systems", "Technology of Programming", "Programming Technologies on the Internet" and part of the optional courses and the diploma project in creating Windows applications and the Internet.</p>			
CONTENTS:			
Training Area		Hours lectures	Hours seminar exercises
Organization of program components in WINDOWS		2	2
WINDOWS Window Object Model, Event Programming, Message Exchange		2	2
Basic WINDOWS concepts, resolving resources, dynamic libraries, program component interaction, RAM management.		2	2
Create custom dialog, resource editor, dialog elements.		3	3
Manage user dialogs, menus, dialog boxes, dialogs.		3	3
Device Context, Graphics, Keyboard and Mouse Control.		3	3
Principle of operation of complex controls: tree control, tabular control		3	3
Creating and accessing dynamic libraries (DLLs).		3	3

COM-modules, principle of operation, exemplary COM modules	3	3
Libraries and modules for user dialogue management MFC, ATL, ActiveX	3	3
Access to databases, ODBC interface, database management functions	3	3
TOTAL: 60 h	30	30